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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,471	12/14/2000	Maged E. Beshai	12633ROUS01U	7757
626	7590	07/02/2004	EXAMINER	
NORTEL NETWORKS LIMITED P. O. BOX 3511, STATION C OTTAWA, ON K1Y 4H7 CANADA			HO, DUC CHI	
			ART UNIT	PAPER NUMBER
			2665	3
DATE MAILED: 07/02/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/735,471

Applicant(s)

BESHA ET AL.

Examiner

Duc C Ho

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-38 is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-7, 9-20, 39-42 is/are rejected.
- 7) ☒ Claim(s) 3 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2665

DETAILED ACTION

Claim Objections

1. Claims 7-8 are objected to because of the following informalities: Claim 7, line 2 recites the limitation "said concatenation". It seems there is insufficient antecedent basis for this limitation in the claim. The same remark applies for claim 8.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. Claims 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7, line 2 recites the limitation "said concatenation". There is insufficient antecedent basis for this limitation in the claim. The same remark applies for claim 8.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4-7, 9-20, and 39-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Duault et al.(US 5,930,265), hereinafter referred as Duault.

Art Unit: 2665

Regarding claim 1, Duault discloses a data processing method for efficiently transporting multimedia packets over a conventional digital packet switching network, the method processes efficiently to transport multimedia packets of fixed and/or variable length over a digital packet switching network to fixed length packets.

each packet being associated with a defined data stream (each packet transmitted toward the edge node A associated with an illustrated source-end points, see figure 1), wherein packets of a defined data stream are concatenated and divided into equal-size segments (see column 3, lines 57-67), the packet concatenation and segmentation being constrained by adaptive delay thresholds (when packet is compressed by a threshold factor 5 or 8, see col. 2, lines 40-54, it is broadly interpreted that the packet, which goes through concatenation and segmentation processes, is being constrained by adaptive delay threshold, see col. 4-line 30 to col. 5-line 39).

Regarding claim 2, Duault suggests transfer rate of the data packet in each stream being associated with allocated capacity of the link, see col.1-line 57 to col.2-line 5.

Regarding claim 4, the threshold factors mentioned in claim 2 are GSM data dependent.

Regarding claim 5, referring to figure 1, the edge node A of the transmitter side is inherently constrained by data storage limitation as it may receive data from all users.

Regarding claim 6, referring to figure 1, the edge node A of the transmitter side inherently comprised a received data stream from the base station having a plurality of associated mobile users.

Art Unit: 2665

Regarding claim 7, figure 1 of Duault comprises source nodes and sink nodes, wherein the concatenation is applied at the ingress port of the source node-namely the edge node A.

Regarding claim 9, this claim has similar limitations as claim 42. Therefore, it is rejected under Duault for the same reasons set forth in the rejection of claim 42.

Regarding claim 10, Duault discloses a data processing method for efficiently transporting multimedia packets over a conventional digital packet switching network. In Duault the switching node A-fig. 1 receives a plurality of transmitted packets from channels of the packet switching access network A. The transmitted packets are assumed coming from the source telephone TA1 to the destination telephone TB1, wherein the transmitted packets including voice are processed in two phases to reach the destination.

The transmitted voice data packets, e.g. 160 bytes long data frames, are processed into ATM cells (corresponding to the first phase), see col. 2, lines 6-62. When data frames compressed at a factor of 5, or 8 applied to GSM telephony, one could aggregate data frames into several consecutive cells, see col. 2, lines 40-62 (corresponding to an aggregate of packets in the second phase).

Regarding claim 11, after data packets being segmented, they will be aggregated in the process. Therefore, it is obvious that there will be an aggregated packet (one packet) results from combining a multiple of segmented packets (waiting packets) in the first phase.

Art Unit: 2665

Regarding claim 12, since the first phase is for segmenting and the second phase is for aggregating, it is obvious that the output segment of the first phase is smaller than the size of the second phase.

Regarding claim 13, it is obvious that the size of a second-phase segment (aggregation) is a combination of multiple of the size of a first-phase segment (segmentation).

Regarding claim 14, referring to figure 1, in Duault the switching node A-fig. 1 receives a plurality of transmitted packets from a single channel of the packet switching access network A. The transmitted packets then segmented into a plurality of segments (waiting packets).

Regarding claim 15, referring to figure 1, in Duault the switching node A-fig. 1 receives a plurality of transmitted packets from a plurality of channels (time slots) from the packet switching access network A. The transmitted packets then segmented into a plurality of segments (waiting packets).

Regarding claim 16, the system of Duault is capable of sorting the packets according to the CIDs of respective connection end points .

Regarding claim 17, the system of Duault is capable of switching the segments of the first phase to the aggregation phase.

Regarding claim 18, the system of Duault is capable of having a plurality of segmentations circuits implemented in the first and second phase.

Regarding claim 19, in Duault a segmentation circuit in the first phase positions at an incoming channel.

Regarding claim 20, the system of Duault inherently employs an algorithm for routing segmenting packets to an aggregation of packets.

Regarding claim 39, Duault discloses a data processing method for efficiently transporting multimedia packets over a conventional digital packet switching network.

A front header (trailer-fig. 4) followed by a corresponding payload data (SSCS PDU payload-fig. 4, see col. 6, lines 1-15) and a plurality of inner headers (the subheaders CID1, CID2-fig. 5, see col. 6, lines 33-45), each inner header followed by a corresponding payload data (SSCS1, SSCS2,..., see col. 6-line 1 to col. 8-line 24).

Regarding claim 40, the SSCS Trailer –fig. 5 being the Trailer-fig.4, includes a Connection ID field-fig. 5 indicating a respective network address, and UDL field indicating the data length.

Regarding claim 41, the SSCS Trailer –fig. 5 being the Trailer-fig.4, includes a UDL field, wherein this field is the only one that indicates the data length.

Regarding claim 42, for the limitation in which the inner headers being limited by an upper bound, please see col. 6, lines 1-12.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duault, in view of Beshai et al.(US 5,745,486), hereinafter referred to as Beshai.

Duault discloses all claimed limitations, except packet concatenation is applied at the ingress port of a source node.

Beshai discloses a high capacity ATM switch, which allows any bit rate data acceptable to both the inlet and outlet ports, see figure 7, col. 5, lines 9-46

One skill in the art would recognize the advantage of using a high ATM switch in which its ingress port having a plurality of output ports.

It would have been obvious to one of ordinary skill in the art, at the time invention was made, to employ the high capacity ATM switch as taught by Beshai into the system of Duault such that a data packet entering the ingress port would be output at the output port of the ingress module of the ATM switch in such a way to improve traffic in data processing over a digital packet switching network.

Allowable Subject Matter

Art Unit: 2665

8. Claims 22-38 are allowed.
9. Claims 3, and 21 are objected to as being independent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hosein (US 6,442,139); Foodeei et al. (6,445,696); Manchester et al.(US 6,724,728); Vargo et al.(US 6,477,164) are cited to show compact segmentation of variable-size-packets streams, which is considered pertinent to the claimed invention.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (703) 305-1332. The examiner can normally be reached on Monday through Friday from 7:00 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 703-308-6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

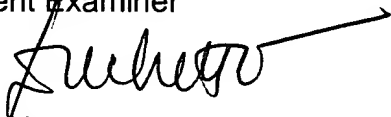
Art Unit: 2665

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

13. Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,

Arlington, VA, Sixth Floor (Receptionist).

Patent Examiner



Duc Ho

06-25-04